

■ GLOBAL PERSPECTIVE

## ***E-Commerce and Export Markets: Small Furniture Producers in South Africa\****

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### ***Introduction***

Excluding government transactions, approximately 90 percent of global e-commerce is conducted among businesses (Mansell 2001). Increasingly, international wood furniture buyers are using the internet to transform the way they do business and by which they collaborate with trading partners. In particular, many of them are using the internet to trade online and to develop close knowledge-based links with suppliers. E-commerce technologies are, in turn, becoming increasingly important for South African small wood furniture producers (SWFPs) as they are integrated into global value chains and are exposed to more sophisticated markets.

SWFPs are likely to benefit from low cost access to the global marketplace, which previously was only open to major companies with a global marketing and distribution infrastructure. The development of effective e-commerce strategies thus is of critical importance for increasing SWFPs' competitiveness in global markets. This is in keeping with Keesing and Lall's (1992) argument that third-world producers often are expected to meet requirements that frequently do not apply as yet to their domestic

markets. Opportunities exist for SWFPs to participate in the reorganization of supply chains to capture efficiency gains and to participate in more geographically diverse supply systems. Failure to adopt e-commerce technologies could lead to SWFPs increasingly becoming marginalized from international markets. By not making the transition to e-commerce, SWFPs run the risk of becoming less competitive, affecting both their present market positions and their long-term viability. As larger companies in the wood furniture value chain integrate e-commerce into their business, small firms without e-commerce capabilities run the risk of being "frozen out" of the value chain.

Unlike large enterprises, many of which already operate in global markets through well-established networks of affiliates, the export potential of SWFPs has been constrained because of their small size, lack of resources, and limited ability to identify and work with new international customers and suppliers. The internet eliminates these disadvantages by opening up global markets to SWFPs with an effective strategy for conducting business online. Reduced transaction costs, lower barriers to market entry, and

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improved access to information likely are to reduce the economically optimal size of firms, thereby encouraging smaller firms to work together to develop global markets. Despite these opportunities, South African SWFPs are lagging behind their counterparts in the European Union, North America, and even developing economies like Brazil, China, and India, in the exploitation of e-commerce.

For SWFPs the e-commerce shift is likely to be profound, but for large firms they are primarily extensions of the proprietary networks that many big firms already are using. Smaller producers would, thus, be able to leap-frog the expensive and relatively inflexible electronic data-interchange (EDI) stage of networking and would be able to go straight to building networks based on an open internet architecture. From a development perspective, small furniture firms are important because of their potential for economic growth, job creation, and black economic empowerment.

The objective of this paper is to provide a preliminary analytical foundation to help focus the policy debate. The discussion that follows is based on insights gleaned from an exploratory, qualitative survey, undertaken between January and March 2001, of SWFPs that currently are exporting. One hundred five exporting SWFPs listed in the *South African Wooden Furniture Trade Directory* (2000) were identified and a short questionnaire and cover letter were sent to each firm. Completed questionnaires were received from 64 firms (a response rate of 61 percent). In addition, face-to-face interviews were conducted with 19 furniture industry experts drawn from academia; government; trade unions; employers' associations; the South African Furniture Export Council; and business, marketing, and information technology (IT) consultancies.

## ***Conceptual Framework: Internet Connectivity and Access to Global Markets***

The issue of engaging more openly in global production and trade networks has become central to debates on how formerly inwardly oriented industrial sectors restructure themselves to maintain competitiveness in a more open, trade-liberalized environment (Schmitz 2000; Sturgeon 2000; Nadvi 1999). Increasingly, trade in wood furniture is "organized by global buyers, who may work for, or act on behalf of, major retailers or brand-name companies" (Humphrey and Schmitz 2001, p. 1). Detailed empirical research on trade in labor-intensive products has shown that access to developed country markets increasingly has become dependent on linking into the global production networks of lead firms situated in highly industrialized countries (Dolan and Humphrey 2000; Schmitz and Knorringer 2000; Gereffi 1999).

In order to participate in export manufacturing to the United States and to Western Europe, South African SWFPs need access to the lead firms (that is, the retailers, brand-name companies, and marketers) in global buyer-driven value chains (Gereffi 1994). According to Gereffi (1999), these lead firms "undertake the functional integration and coordination of internationally dispersed activities" (p. 41). The fact that these lead firms' sourcing strategies are becoming increasingly internet-based may lead to unconnected firms in developing countries being bypassed in global supply chains.

Therefore, SWFPs need to position themselves strategically within global trade networks and to develop information and communication technology (ICT) strategies for connecting to the lead firms. In theory, upgrading opportunities are likely to stem from leverag-

ing the information flows and learning potential that is transmitted through internet-organized trade networks. When foreign buyers wish to develop new sources of supply, they are likely to look for producers that have the potential to engage in e-commerce. Thus internet-based e-commerce capabilities become a key source of competitive advantage in the value chain.

### ***South African Small Wood Furniture Producers***

The South African wood furniture production sector (WFPS) is dominated by small firms (Table 1). Since 1994, the WFPS landscape has been altered substantially by the twin pressures of globalization and trade liberalization. This is attributable partly to South Africa's increasing integration into the global economy following the country's first democratic elections in 1994. This process of global integration has been accelerated through the government's growth, employment, and redistribution (GEAR) strategy, which was implemented in 1996 in the wake of a currency crisis. GEAR follows orthodox economic ideas focused on fiscal austerity and the promotion of trade liberalization, leading to increasing international competition,

along with increasing opportunities for exports (Habib and Padayachee 2000). The key challenge thus confronting SWFPs is not whether to participate in global processes but how to do so in ways that provide for sustainable growth.

There are several reasons for shifting the focus to export markets. First, the local market is small, making it difficult to sustain economies of scale. Second, furniture is a consumption good, and in a developing country like South Africa that has a depressed construction and building industry, high structural unemployment, a sluggish economic growth rate, and high levels of poverty and inequality, the potential for growing the domestic market in the short term is not great. Therefore, the higher volumes and higher prices offered by the export market offer a superior growth trajectory for SWFPs.

The main export destinations for South African wood furniture products are the United Kingdom and Germany, and to a lesser extent Australia, the Middle East, the United States, and other countries in Western Europe. With the possible exception of the Middle East, these are export markets with high levels of e-commerce penetration. It is clear, therefore, that South African SWFPs are competing in export markets characterized by ICT-driven eco-

**Table 1**  
**South African Wood Furniture**  
**Producers by Size of Firm\***

<b>Firm Size</b>	<b>Number of Employees</b>	<b>Number of Plants</b>	<b>Percent of Plants</b>
Micro	1–4	261	17.9
Small	5–49	998	68.4
Medium	50–199	158	10.8
Large	≥200	43	2.9

\*Source: Dunne 2000.

nomies, sophisticated IT infrastructures, high internet connectivity penetration, increased availability of broadband connectivity, improved online security, and increased willingness to buy and sell over the internet.

According to Table 2, furniture accounted for 3.5 percent of total manufacturing employment and 2.7 percent of total manufacturing exports for South Africa between 1995 and 1999. Of the labor-intensive sectors, furniture is the highest net exporting sector and has the best exporting performance figures between 1995 and 1999 (Table 3). Exports in furniture sales grew from less than five percent in 1992 to over 40 percent in 1999 (Kaplinsky, Morris, and Readman 2001). This exceeded the export/sales ratio in the South African manufacturing sector as a whole. The WFPS is therefore important for South Africa in terms of employment and its contribution to economic growth and to exports.

In 1998, the world furniture industry was the 19th-largest traded goods sector, with a total value of world trade of US\$44.9 billion, surpassing the value of trade in the apparel industry (US\$40.6 billion) and the footwear industry (US\$33.8 billion). Between 1994 and 1998, all world trade grew by 16 percent, whereas world trade in the wood furniture industry grew by 26 percent (International Trade Center 2001).

To put this growth in context, the other two low-technology sectors (that is, apparel and footwear) grew by 18 percent and two percent, respectively, during the same period. Competition in the global furniture industry has intensified in recent times with the increasing penetration of industrialized country markets by developing countries (mainly from Asia) and by the former command economies of Central and Eastern Europe. For example, the top furniture exporting countries include China, Malaysia, Poland, and Mexico, as well as Italy, Canada, Denmark, and Spain. There

are only five industrially advanced economies in the list of the top 20 net-exporting countries. South Africa is positioned at number 14.

Theoretically, the internet provides South African furniture manufacturers with the requisite connectivity to become a global player through world-wide marketing and sourcing. E-commerce represents a major opportunity for SWFPs to compensate for their traditional lack of access to national and international markets. The improved transaction efficiency and reduced communication and information costs of the internet offer opportunities to small producers for extending their global reach. Small firm competitiveness also can be enhanced through the attainment of internet-mediated "collective efficiency" gains (Schmitz 1999).

Internet penetration among furniture firms with 200 or more employees has reached 100 percent, but penetration is only 60 percent in firms with less than 50 employees. The main uses of the internet by SWFPs include accessing commercial databases or services, information searches, marketing, monitoring prices, and email applications. The main advantages SWFPs associate with e-commerce are strengthening customer relationships, reaching new markets, optimizing business processes, and reducing costs.

Only 11 percent of SWFPs are using the internet to undertake transaction facilitation activities. A major barrier to e-commerce adoption among SWFPs is the lack of awareness of the potential benefits of e-commerce. The survey findings suggest that although the majority (72 percent) of SWFPs had positive expectations of how the internet would affect their penetration of export markets, they generally were not well prepared for e-commerce. Only six percent of SWFPs had a formal e-commerce policy, while 17 percent of companies were attempting to generate

**Table 2**  
**Trade and Employment Data for South Africa, 1995–1999\***

Industry	Number of Employees	Annual Change in Employment (%)	Annual Change in Exports (%)	Exports (US\$m.)	Imports (US\$m.)	Production (US\$m.)	Annual Change in Export Openness (%)	Wage Per Head (US\$)	Annual Change in Wage Per Head (%)	Annual Change in Productivity (%)
Total	1,436,430	-0.2	6.9	14,919	21,688	73,132	5.9	9,550	2.9	1.2
Manufacturing										
Textiles	70,210	-3.6	5.0	426	693	2,396	6.5	6,429	3.2	2.1
Footwear	23,310	-1.3	10.3	17	158	478	11.3	4,710	1.9	0.3
Apparel	126,280	0.2	10.5	166	200	1,714	9.0	4,575	3.2	1.3
Furniture	50,570	2.9	20.2	409	91	1,027	19.1	6,452	1.6	-1.9

\*Source: Calculations based on data from the International Trade Center ([www.intracen.org](http://www.intracen.org)).

**Table 3**  
**Net Export Data for South Africa, 1995–1999 (US\$'000)\***

<b>Selected Product Groups</b>	<b>Gross Export Value 1998</b>	<b>Net Export Value 1995</b>	<b>Net Export Value 1998</b>	<b>Net Export Percent Change 1995–98</b>
Furniture	447,176	330,507	365,895	10.7
Footwear	15,761	-154,585	-153,780	0.5
Apparel	150,809	17,321	-38,995	-225.1

\*Source: Calculations based on data from the International Trade Center (www.intracen.org).

sales through the internet. Only 39 percent of SWFPs had a corporate website. SWFPs are using their websites primarily as online brochures rather than for online trading. Currently, less than five percent of SWFPs have e-commerce systems in place.

Making the transition to e-commerce will not be easy, as there are formidable obstacles to overcome. These include the following:

- Limited awareness among SWFPs of the potential of e-commerce;
- Evolutionary path dependencies that focus on the reduction of labor and input costs as competitive advantage rather than on pursuing a knowledge and innovation-intensive growth trajectory;
- Management's insular mentality, which have locked firms into an inwardly oriented way of thinking;
- The lack of adequate e-commerce infrastructures, skills, and capabilities. Many SWFPs simply lack the basic knowledge and technical skills to implement e-commerce strategies; and
- The relatively high initial investment costs involved in developing e-commerce strategies.

### ***Conclusion: The Policy Challenge***

The policy challenge is to create an enabling and nurturing environment aimed at promoting and accelerating the diffusion of e-commerce technologies and strategies among South Africa's SWFPs. Policy needs to focus on two key issues:

- Diffusion, including dissemination of information on e-commerce (success stories, best practice, and opportunities and obstacles related to the use of the internet and e-commerce), training, skills development, and human resources; and
- Enabling, such as network infrastructure and transaction security covering authentication and certification.

Government needs to become involved actively in developing training courses and workshops on e-commerce for SWFPs. The establishment of a center to provide comprehensive information, advice, and training on business usage of the internet as well as support services for the establishment of e-commerce activities is of critical importance. Training and skill formation should be carried

out in conjunction with business and industry associations and with a consortium of small firms in order to gain economies of scale in developing and delivering training services.

A policy priority is to liberalize the highly regulated and concentrated South African telecommunication market and to promote competition in order to stimulate new investment, to increase demand for communications access and services through falling prices, and to promote greater efficiency and innovation in the provision of infrastructure and services. Policy initiatives to lower network infrastructure costs and internet access charges for SWFPs are important. This is likely to provide a stimulus to the growth of e-commerce among SWFPs. In the Organization for Economic Cooperation and Development (OECD) (1999a) countries, for example, the availability of affordable access to high-speed telecommunication infrastructure is closely linked with firm migration to e-commerce.

The magnitude of the e-commerce challenge is such that there is a need for various public-private and multipartnerships, alliances, and consortia. There is an urgent need for the forging of partnerships to

- Develop e-commerce solutions and systems that are tailored to SWFPs;
- Assist SWFPs to access capital for their e-commerce ventures;
- Encourage small firms to form networks and clusters in order to share knowledge, to reduce the average costs of their input transactions, and to increase their relative market power in e-commerce transactions;
- Develop knowledge and trust-based collaborative relationships in the South African wood furniture value chain;
- Develop human capacities and skills;
- Educate firms about e-commerce and to make them aware of e-

commerce opportunities, challenges, and risks; and

- Assist SWFPs in building internet-based pipeline linkages with lead firms in the United States and the European Union.

Close coordination and effective collaboration among the different stakeholders is essential if scarce resources are to be deployed efficiently. Although SWFPs are lagging behind larger furniture firms in the adoption of e-commerce, there is evidence suggesting that early-adopting smaller firms outperform other similar sized firms (OECD 1999b). The aim is to enable small firms to benefit from the positive gains of internet-driven networking and from "first-mover" advantages.

E-commerce will play an instrumental role in establishing and in sustaining global linkages and in so doing will provide leverage for SWFPs linking into export markets. Interfirm e-commerce capabilities are important for SWFPs as they are struggling to compete in a globalized and interconnected world that is organized around knowledge and information flows. Of course, the transition to an integrated internet trading system will not be easy. It is a long-term project that will require a great deal of commitment from the different stakeholders.

E-commerce technologies are becoming increasingly important for South Africa's SWFPs as they are integrated into global value chains and are exposed to the demands of more sophisticated export markets. Failure to adopt e-commerce technologies could lead to SWFPs increasingly becoming marginalized from international markets. Making the transition to e-commerce will not, however, be easy, as there are formidable obstacles to overcome. The policy challenge is to create an enabling and nurturing environment aimed at promoting and at accelerating the diffusion of e-commerce technologies and strategies among South Africa's SWFPs.

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